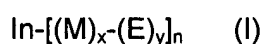


In the Claims

1. (currently amended) A coating composition comprising

- a1) ~~[[a]]~~physically drying film forming binder resin or resins;
- a2) ~~[[a]]~~thermally cross linking film forming binder resin or ~~binder~~ resins;
- a3) ~~[[a]]~~radiation curable film forming binder resin or ~~binder~~ resins;
- a4) ~~[[an]]~~autoxidatively drying film forming binder resin or resins; or
- a5) a combination of binder resins with at least two different crosslinking mechanisms selected from a1), a2), a3) and a4);

b) a polymer or copolymer levelling agent of formula (I)



obtained by nitroxyl mediated controlled free radical polymerization~~polymerisation~~ wherein

In is the initiator fragment starting the polymerization~~polymerisation~~ reaction;

M is at least one monomer selected from the group consisting of acrylic acid, methacrylic acid, acrylic acid (C₁-C₂₂)alkyl esters, acrylic acid (C₁-C₂₂)hydroxyalkyl esters, methacrylic acid (C₁-C₂₂)alkyl esters, methacrylic acid (C₁-C₂₂)hydroxyalkyl esters, acrylic acid (C₁-C₂₂)alkyl esters or methacrylic acid (C₁-C₂₂)alkyl esters which are substituted by amino, (C₁-C₂₂)alkylamino, (C₁-C₂₂)dialkylamino, -SO₃H, epoxy, fluoro, perfluoro or siloxane groups, styrene, substituted styrene, acrylamide and methacrylamide, N-mono(C₁-C₂₂)alkyl acrylamide, N,N-di(C₁-C₂₂)alkyl acrylamide, and a multifunctional monomer with two or more ethylenically unsaturated bonds;

provided that the amount of unsubstituted acrylic acid (C₁-C₂₂)alkyl esters or/and methacrylic acid (C₁-C₂₂)alkyl esters is more than 30 % by weight based on the weight of the total monomer mixture;

E is a group bearing at least one stable free nitroxyl radical, which is bound via the oxygen atom to the polymer or copolymer; or a group which results from a substitution or elimination reaction of the attached stable free nitroxyl radical;

x is the total number of monomer units, which is a number between 5 and 5000;

y is a number 1 or greater than 1 indicating the average number of end groups E attached to the monomer sequence (M)_x;

n is a number from 1 to 20; and

c) optionally water or/and one or more organic solvents.

2. (currently amended) A coating composition according to claim 1, comprising

a2) a thermally cross linking film forming binder resin or ~~binder~~ resins; or

a3) a radiation curable film forming binder resin or ~~binder~~ resins.

3. (currently amended) A coating composition according to claim 1, comprising

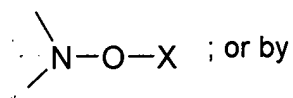
a2) a thermally cross linking film forming binder resin or ~~binder~~ resins.

4. (currently amended) A coating composition according to claim 1, comprising

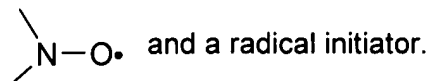
a2) a thermally cross linking film forming binder resin or ~~binder~~ resins without water and organic solvent, which is in the form of a solid powder.

5. (currently amended) A coating composition according to claim 1, wherein the polymer or copolymer levelling agent of formula (I) **[I]** is obtained by

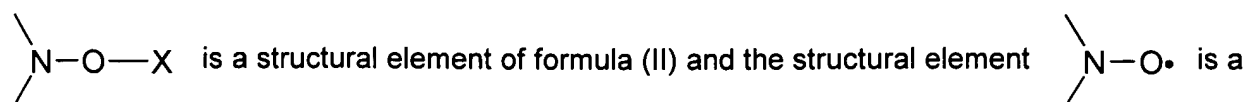
b1) polymerization in the presence of an alkoxyamine initiator/regulator having the structural element



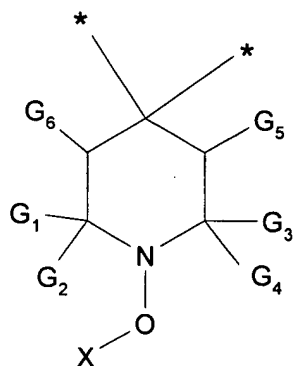
b2) polymerization in the presence of a stable nitroxyl free radical having the structural element



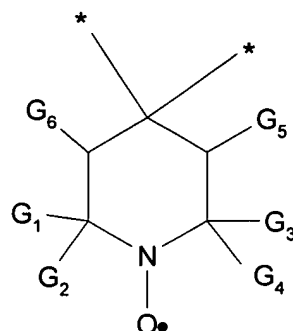
6. (currently amended) A coating composition according to claim 5, wherein the structural element



structural element of formula (II')



(II)[[.]]



(II')[[.]]

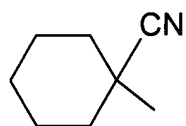
wherein

G₁, G₂, G₃, G₄ are independently C₁-C₆alkyl or G₁ and G₂ or G₃ and G₄, or G₁ and G₂ and G₃ and G₄ together form a C₅-C₁₂cycloalkyl group;

G₅, G₆ independently are H, C₁-C₁₈alkyl, phenyl, naphthyl or a group COOC₁-C₁₈alkyl;

X is selected from the group consisting of

-CH₂-phenyl, CH₃CH-phenyl, (CH₃)₂C-phenyl, (C₅-C₆cycloalkyl)₂CCN, (CH₃)₂CCN,



, -CH₂CH=CH₂, CH₃CH-CH=CH₂ (C₁-C₄alkyl)CR₂₀-C(O)-phenyl, (C₁-C₄)alkyl-CR₂₀-

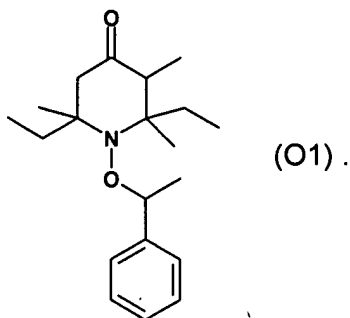
C(O)-(C₁-C₄)alkoxy, (C₁-C₄)alkyl-CR₂₀-C(O)-(C₁-C₄)alkyl, (C₁-C₄)alkyl-CR₂₀-C(O)-N-di(C₁-C₄)alkyl, (C₁-C₄)alkyl-CR₂₀-C(O)-NH(C₁-C₄)alkyl[[.]] and (C₁-C₄)alkyl-CR₂₀-C(O)-NH₂, wherein

R₂₀ is hydrogen or (C₁-C₄)alkyl and

* denotes a valence.

7. (currently amended) A coating composition according to claim [[6]]5, wherein the leveling agent of formula (I) is obtained by

b1) polymerization in the presence of an alkoxyamine initiator/regulator
~~structural element of formula (II) is a compound of formula (O1)~~



8. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), has a polydispersity of between 1.0 and 2.0.

9. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), has a glass transition temperature between 20° C and 200° C.

10. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), is composed of at least 30 % by weight of tert-butylacrylate and/or tert-butylmethacrylate, based on the weight of total monomers.

11. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), is a linear polymer or copolymer, where in formula (I) n is 1.

12. (currently amended) A coating composition according to claim 1, wherein in formula (I), component b), y is 1.

13. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), has a number average molecular weight of between 3000 to 50000 g/mol (Dalton).

14. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), is composed of at least 30 % by weight of tert-butylacrylate and/or tert-butylmethacrylate, and 0.5 to 50 % of a functional monomer which is selected from the group consisting of acrylic acid, methacrylic acid, acrylic acid (C₁-C₆)hydroxyalkyl esters, methacrylic acid (C₁-C₆)hydroxyalkyl esters, acrylic acid (C₁-C₆)alkyl esters and methacrylic acid (C₁-C₆)alkyl esters which are substituted by amino, (C₁-C₆)alkylamino, (C₁-C₆)dialkylamino, epoxy, fluoro, perfluoro or siloxane groups.

15. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), is composed of at least 50 % by weight of tert-butylacrylate and/or tert-butylmethacrylate and is a solid at room temperature.

16. (currently amended) A coating composition according to claim 1, wherein the levelling agent, component b), is present in an amount of 0.1 to 15% by weight, based on the weight of the film forming binder resin or resins, component a).

17. (currently amended) A process for improving the levelling of a coating composition according to claim 1, which process comprises the steps of applying the coating composition to a substrate and exposing it to thermal energy or electromagnetic radiation in order to obtain a homogenous solid coating.

18-20. (canceled)